Iran's Nuclear Program

U.S. Department of Energy
National Nuclear Security Administration

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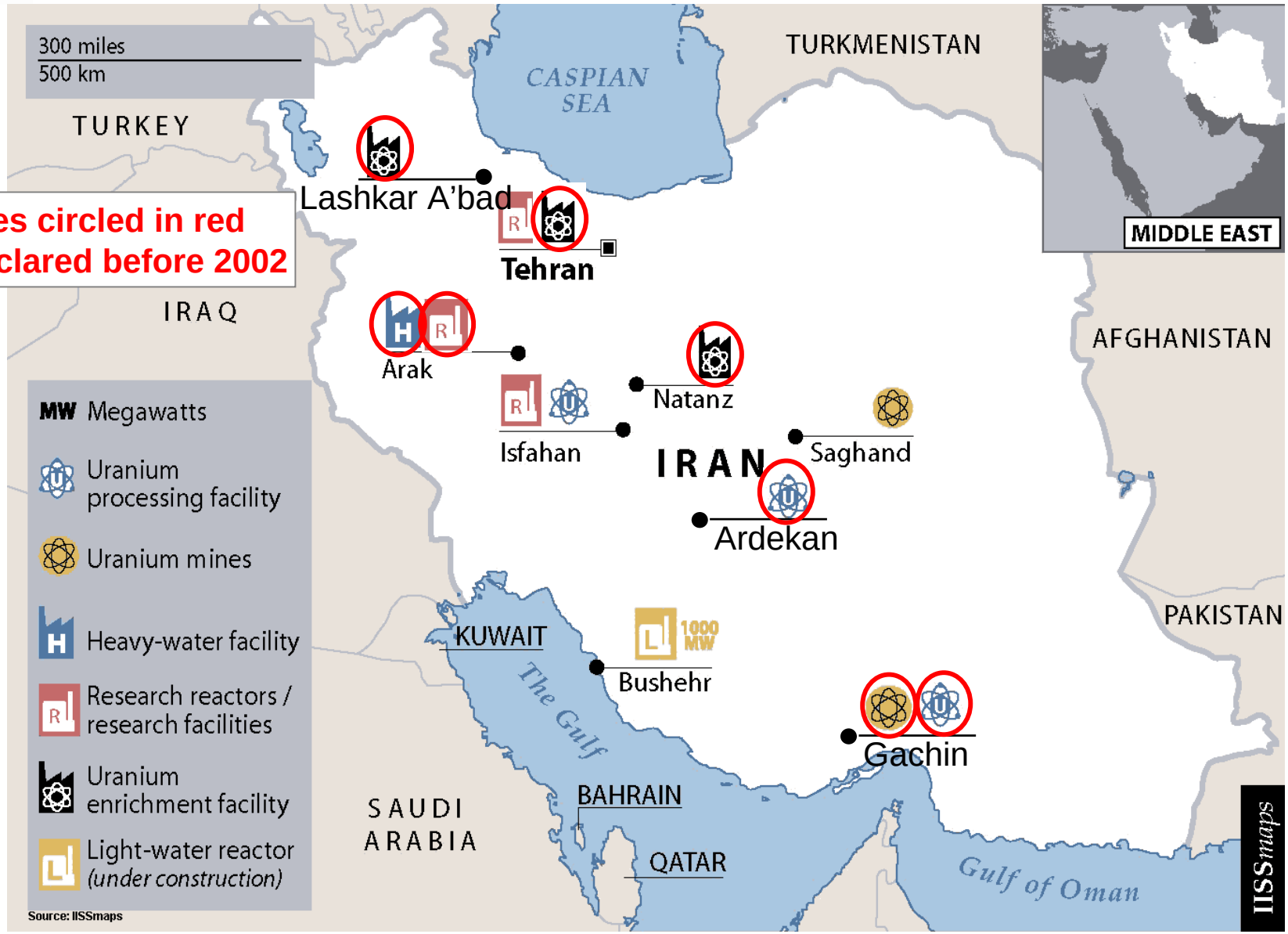
Iran's nuclear program poses a significant proliferation threat

- In September 2005, the IAEA Board of Governors found that Iran's twenty-year history of "failures and breaches of its obligations to comply with its NPT Safeguards Agreement constitute non compliance"
- Iran is restarting activities related to pilot-scale enrichment cascade operations and has removed seals from centrifuge components and workshops
- Following the 4 February 2006 Resolution, Iran has limited IAEA inspections to only those required by its Safeguards Agreement

Iran has violated its safeguards agreement with the IAEA, broken its suspension agreements with the EU-3, cut-off substantial IAEA inspector access, and is preparing for uranium enrichment

Derived from multiple IAEA reports to the Board of Governors and the Board Resolution of 24 September 2005

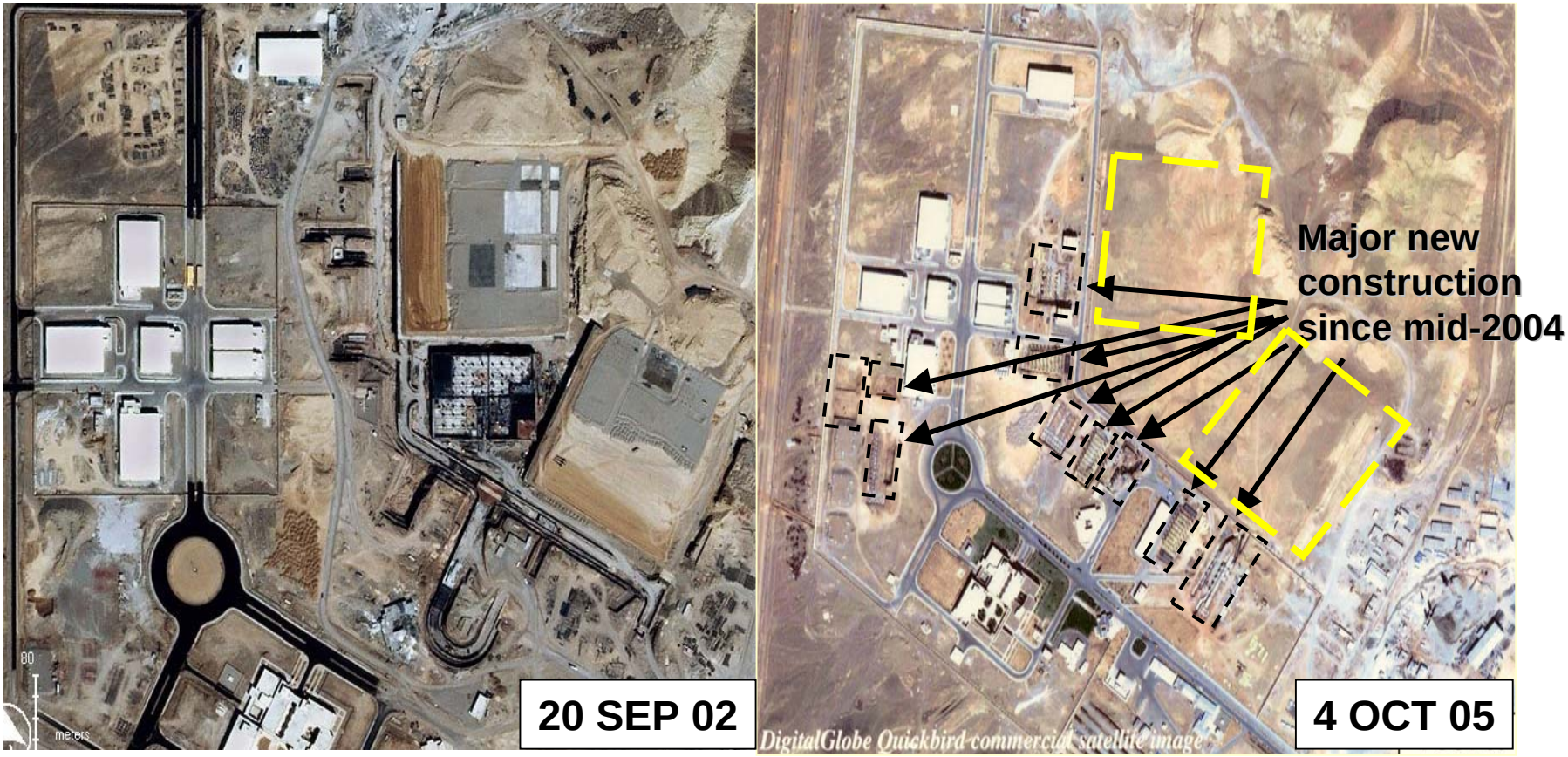
Iran possesses a major nuclear program that was largely undeclared until revealed in 2002



Iran is producing UF_6 at Esfahan

- Uranium Conversion Facility (UCF) restarted in August 2005
- Actions defied Board resolutions and broke suspension agreement
- Iran is now producing UF_6, feed material for enriched uranium
- Tens of tons of UF_6 already stockpiled

Significant construction at Natanz enrichment facility continued in 2005, despite the Suspension Agreement



Since 2002, Iran buried and hardened its fuel enrichment facilities, and continued major new construction

Successful operation of a 164-machine pilot cascade is a key milestone

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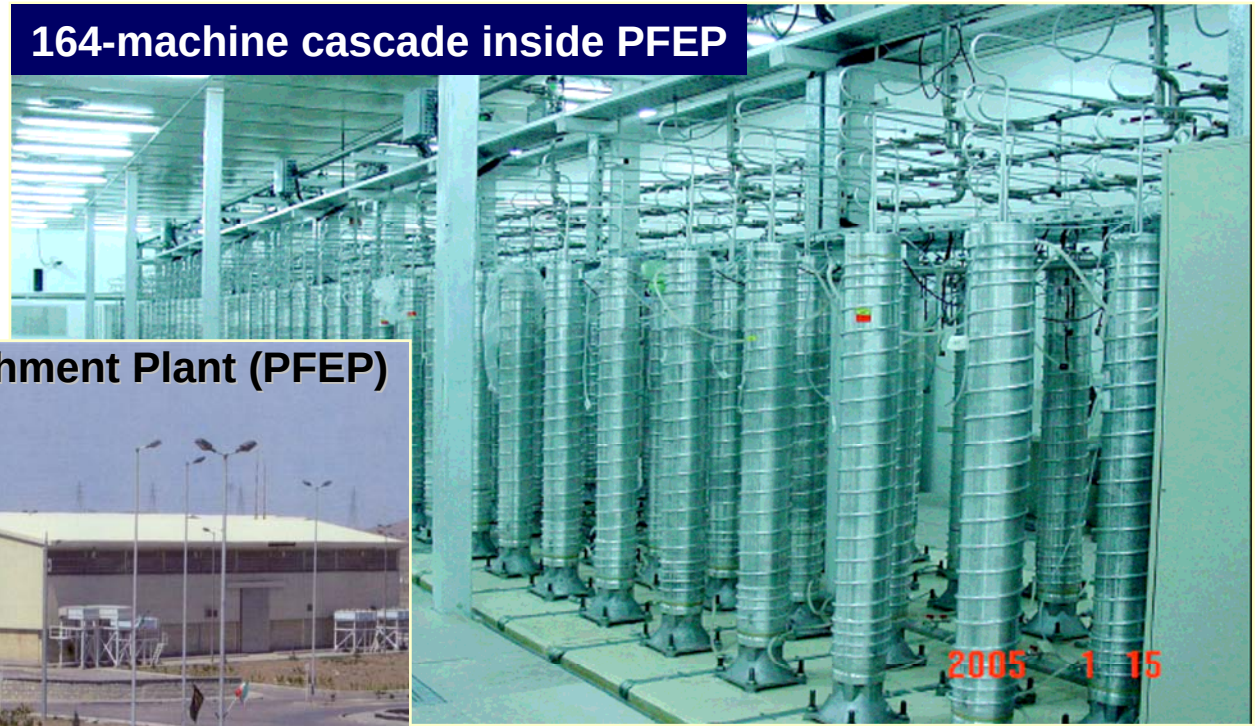
164-machine cascade inside PFEP



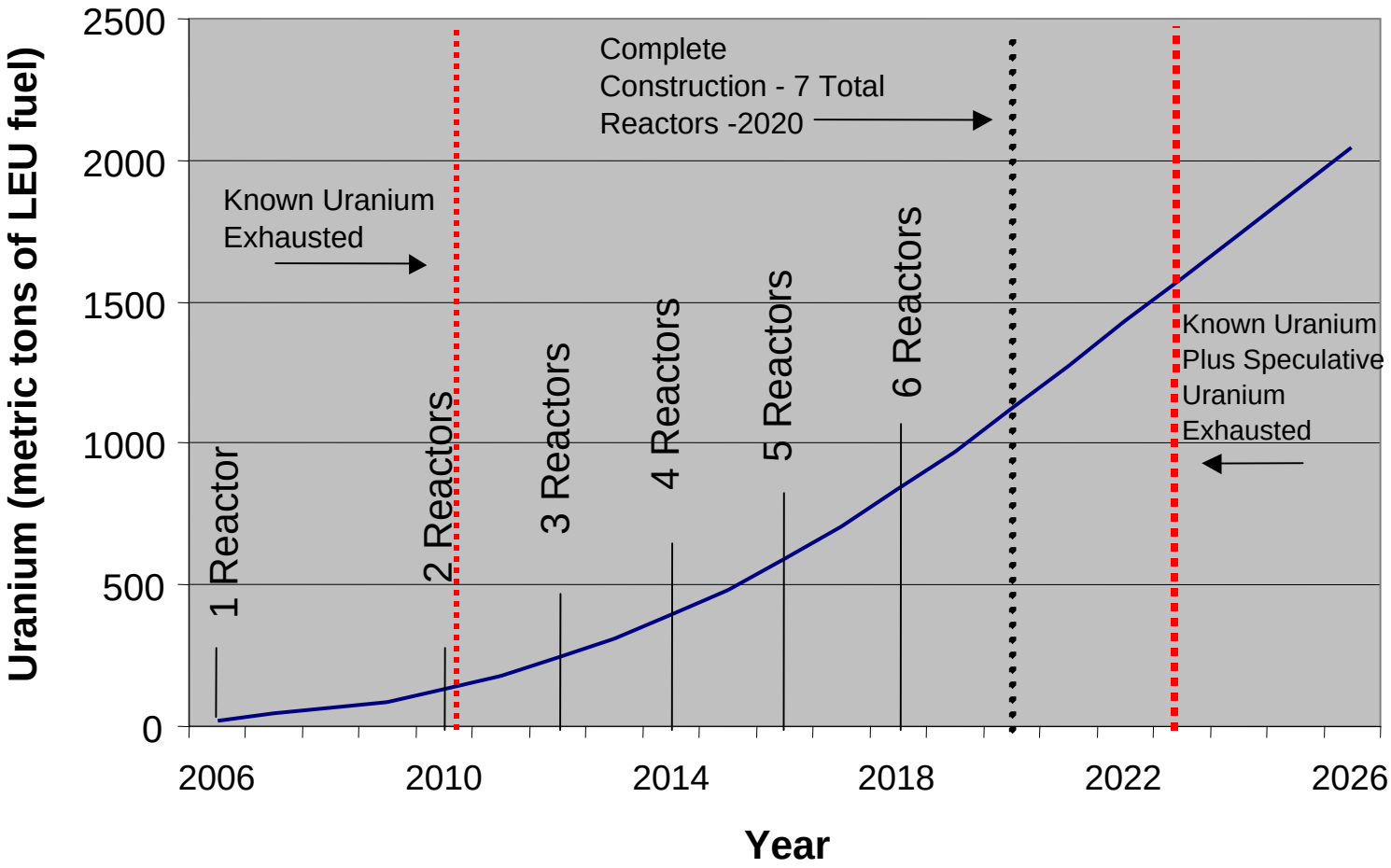
Pilot Fuel Enrichment Plant (PFEP)

Reliable pilot cascade operation establishes ability to produce fissile material – at any level of enrichment and at any location

Unresolved Issues

- "Administrative interconnections" between activities to convert uranium dioxide into UF_4 ("Green Salt"), high explosive testing, and the design of a missile re-entry vehicle, all of which "could have a military nuclear dimension"
- IAEA has unanswered questions concerning Iranian procurement activities and dual-use equipment that could have weapons applications
- 7-year gap between receipt of P-2 design information and claimed R&D work provides little confidence that full story has been told
- Iran denied/negated IAEA access to military facilities suspected of supporting nuclear program efforts

Iran is incapable of nuclear power self-sufficiency



- Known uranium will be exhausted by 2010 with only two operational reactors.
- Total estimated uranium resources will be depleted by 2023 with all reactors far short of their 40 year design lifetime.

Iran's total known and speculative uranium resources are 15,277 tons of uranium, and would provide for less than 10 years operation for 7 reactors – far less than their life-cycle

Iranian mastery of centrifuge technology and continued activities poses a serious proliferation concern

- Iran's fuel cycle pursuits are the pathway to full-scale enrichment
- Given Iran's resource constraints and options, the complete nuclear fuel cycle is not economically justifiable for Iran
- Once Iran masters the technology, assurances provided by IAEA safeguards are limited
- Iran's decision to halt its implementation of the Additional Protocol undermines IAEA's ability to find undeclared activities
- Iranian R&D and enrichment will enable the production of material for nuclear weapons at a time and place of its choosing